

GERIATRIC RESEARCH, EDUCATION AND CLINICAL CENTER

Annual Report: Fiscal Year 2004

Part II: Accomplishments

NOTE: The **GRECC Annual Report** reflects status and accomplishments of **GRECC Core Staff** (as defined below) only. Report year is from October 1 through September 30. This Accomplishments report should be no more than a total of ten pages.

GRECC Core Staff includes **Primary Core**, **Affiliated Core**, and **Research Core**. **Primary Core** = positions authorized by the original GRECC allocation plus any addition in ceiling from VA Central Office specifically designated for GRECC. **Affiliated Core** = Staff who work full- or part-time in direct support of the GRECC's research, education or clinical activity. May be either "contributed" by the VA Medical Center or acquired through centralized enhancements/awards for programs such as Home-Based Primary Care, Geriatric Evaluation and Management Program, etc. To be considered Affiliated Core, staff must be organizationally aligned under the GRECC or specifically identified by the Medical Center as GRECC-affiliated staff. **Research Core** = Full-or part-time staff who devote 51% or more of their total time to GRECC research and whose salaries are supported by research funds (either VA or non-VA). Includes all GRECC staff whose salaries are paid from research funds (e.g., Associate Investigator, Assistant Research Scientist, Senior Research Career Scientist; Research Career Scientist, Advanced Research Career Scientist).

1. GRECC NAME/LOCATION

- a. **GRECC Name:** West Los Angeles
- b. **Location:** VA Greater Los Angeles Healthcare System - VISN 22

2. CONTACT PERSON

- a. **Name:** Theodore J. Hahn, M.D.
- b. **Position:** Deputy Director, GRECC
- c. **Phone, e-mail:** (310)268-4110 Theodore.Hahn@Med.VA.Gov

3. GRECC FOCUS AREA(S)

NOTE: Each problem area should ideally be approached from the basic biomedical, clinical and health services research perspectives, as well as from the rehabilitation research perspective where that expertise exists. The number of problem areas should be limited to one or two. If the focus of research is different for basic biomedical, clinical, health services and/or rehabilitation research, there should be no more than a total of 4 major areas of investigation. Changes to GRECC focus area(s) must be approved by VACO (114).

a. Basic Biomedical: Cellular & molecular basis of osteoporosis & osteoarthritis; cellular & molecular basis of immunosenescence

b. Applied Clinical: Pathogenesis & management of osteoporosis, geriatric rehabilitation, immunology/infectious diseases

c. Health Services: Evaluation of clinical programs, geriatric rehabilitation cost-effectiveness, minority elderly health care utilization

d. Rehabilitation:

4. ADMINISTRATION

a. **GRECC Impact on Host VAMC in Current Year** (*list up to five most important ways in which the GRECC has had specific impact on host VAMC research, staff education, program evaluation, or clinical care improvements for elderly veteran, i.e., how the GRECC has “made a difference” in these areas within the entire host VAMC; up to five lines each*):

1. WLA GRECC clinicians support 12 inpatient and outpatient clinical programs at GLA, providing primary care, attending coverage and teaching. A total of 4.60 Primary Core WLA GRECC staff FTEE (1.55 MD, 0.9 SW, 0.9 GNP, 1.0 LVN, 0.25 secretary), corresponding to 9,250 hours/year of clinical care time and \$512,000/year in salary and benefits, are devoted to providing direct patient care delivery at GLA. Additional major clinical care delivery is provided by GRECC clinical trainees (see below).
2. The WLA GRECC also plays a major role in developing improved new systems of care for older veterans at GLA and throughout the VISN. During the current year, GRECC staff have begun the development of new care coordination home telehealth (CCHT) programs at GLA to better manage frail elderly veterans at risk for functional decline and to improve the outcomes of post hospital discharge rehabilitation programs for older adults. If successful, this program will be exported to all VISN medical centers and nationally.
3. WLA GRECC core staff supervises ≥ 230 medical, nursing, dentistry, psychiatry and allied health care professional trainees/year. The majority of these trainees provide direct care delivery and a number of them return to fill key clinical positions after graduation.
4. The WLA GRECC provided \$767,436 in VERA Research Support dollars to GLA in FY04 (after the current 0.58 VA national cost for research support factor), on the basis of total WLA GRECC research grant funding for the year. This figure combined with the \$512,000 in WLA GRECC Primary Core staff FTEE time (above) provided to GLA for primary care delivery in the current year exceeds the total of all WLA GRECC staff salaries and benefits for FY04.
5. The WLA GRECC provides numerous educational programs for GLA staff, including in-service education programs, such as aging related competency training for JACHO reviews, Medical Grounds, and multiple lectures on a broad range of topics in geriatrics and gerontology for GLA staff. These programs greatly increase staff and trainee awareness of, and competency in, age-related disorders and new methods for improving the care of older veterans.

b. **GRECC Impact on VISN in Current Year** (*list up to five most important ways in which the GRECC has had specific VISN-wide impact on research, education/training, program evaluation, or clinical care improvements for elderly veterans, i.e., how GRECC participation in VISN-wide activities has “made a difference” in these areas within the entire VISN; up to five lines each. NOTE: GRECCs are intended and expected to serve as a regional, and not merely local resource*):

1. The WLA GRECC continued to provide extensive support to the VISN Geriatrics and Extended Care Committee (GECC) which oversees VISN wide GEC program operations. This group, chaired since its inception by Dr. TJ Hahn, has significantly enhanced the number, scope and quality of VISN GEC programs, improved GECC care efficiency, and enhanced care access throughout the VISN. VA-based and community-based care capacity has been expanded to reach and exceed VACO targets. The GECC has also played primary role in determining future directions in GEC care.
2. GRECC staff played the lead role in establishing a VISN care coordination home telehealth (CCHT) program and Coordinating Committee, with L Opalinski, MSW subsequently assuming the role of director of VISN CCHT operations. This group has facilitated the implementation of CCHT programs at all 5 VISN medical centers, and the GRECC led successful applications to VACO and the VISN for \$1.2 million in required startup CCHT

equipment funds. GRECC staff are currently playing a lead role in developing methods for ongoing evaluation of this program.

3. As discussed below, GRECC staff initiated, implemented, and played the lead role in a 4-year collaborative planning process with VACO and the State of California that has resulted in the approval and funding of a new 400-bed academic California State Veterans Home (CSVH) to be located in VISN 22 on the WLA campus. This new facility will increase VISN GEC LTC care and training resources, and will provide continuing education programs for the VISN CSVH system.

4. The GRECC provides three annual CME conferences on subjects relating to geriatrics and extended care, targeted in particular to VISN GEC staff and trainees. In addition, the GRECC sponsors an annual VISN GEC staff retreat with seminars, lectures and working groups focused on GEC topics of current importance to the VISN.

5. GRECC senior staff serve on a number of standing and ad hoc VISN committees, and provide expertise and ongoing administrative support for a variety of VISN initiatives.

c. GRECC Trend-Setting Innovations since October 1, 1999 (*list up to five most significant GRECC research, education or clinical innovations in past five years; for each item, provide date, GRECC staff responsible, and up to five line description*):

1. VISN Geriatrics And Extended Care Committee (GECC) Leadership – In 2001, Drs. TJ Hahn, J Kramer, S McDougall and LZ Rubenstein developed the VISN 22 GECC, with representatives from each of the 5 medical centers, to improve the scope, access, quality and efficiency of GEC care VISN-wide, and to enhance GEC related education and research activities. This Committee, chaired by Dr. Hahn, has been highly successful in all of these areas, bringing VISN VA- and community-based GEC care levels up to and above VACO standards. Over the past 3 years, GECC efforts have resulted in the opening multiple new clinical GEC programs VISN wide to improve access and quality of care.

2. Care Coordination Home Telehealth (CCTH) – Starting in 2003, L Opalinski, MSW, and Drs. ND Harada, and TJ Hahn led the development of a new VISN-wide CCTH program and Coordinating Committee, now directed by Ms. Opalinski. Accomplishments to date have included successful applications to the VISN and VACO for \$1.2 million in startup CCTH equipment, establishing active CCTH programs at all 5 VISN sites, enrollment of more than 400 patients VISN wide to date, development of a database to allow ongoing outcomes analysis, and initial development of new GLA-based geriatrics CCTH programs to improve the management of frail elderly and enhance post-hospitalization rehabilitation outcomes in older adults.

3. Calif Veterans State Home (CSVH) – Ongoing negotiations with VACO and the State of California begun in 1999 by Drs. TJ Hahn, J Kramer and Damron-Rodriguez (ex-GECC) culminated in 2004 with the approval and funding of a new \$250 million 400-bed academic CVSH to be located in the WLA campus, with two 60-bed/50 ADHC satellites in the San Fernando Valley. The WLA CVSH will be unique nationally, serving as a major regional training resource in long term care and providing continuing medical education to the entire CSVH system via on-site training and videoconferencing. Construction is scheduled to begin in 2006.

4. Age-Related Immune Dysfunction – In a pioneering series of innovative human, animal and cell culture studies beginning in 1999, Drs. K Uyemura, SC Castle and T Makinodan have begun to define the basis of the age-related decline in immune cell function. Their research has uncovered previously unknown basic shifts in the patterns of immune cell response with age, due to changes in immune cell function and interactions, and altered production of interleukin-10, interleukin-12 and other regulatory proteins. Pharmacologic means to reverse these changes are under investigation. These studies hold the promise of improved management of infectious diseases in older veterans.

5. Factors Influencing Utilization of VA Care – The previously unexamined roles of various combat related, ethnic and socioeconomic factors in determining veterans' attitude toward, and utilization of, VA healthcare services were investigated by Drs. ND Harada, J Damron-Rodriguez (former GRECC faculty) and S Dhanani in a series of innovative studies from 2000-2004. Rates of utilization, and acceptance, of VA based care varied significantly between WWII, Korean, Vietnam, and later veterans, and with ethnic background. Reasons for these variances

were examined in multiple focus groups and patient interviews, providing important new data that will lead to improved approaches to promote better access to and utilization of VA care by all veterans.

5. RESEARCH

a. Key Findings Published in Current Year – GRECC Core Staff as PI or CO-PI *(list up to five; for each item provide GRECC Core Staff name(s), journal reference, and up to five line description of topic/method/ results/clinical significance; use layperson language):*

1. The association of early cognitive decline with health services use was examined by Dr. JC Chodosh in an analysis of data on community dwelling elderly over a 3-year period. Key findings included the observation that higher-functioning older persons who experienced a decline in overall cognitive function were more likely to be hospitalized. This demonstrates that early detection of cognitive decline is important to optimal healthcare management in older individuals (Journal of the American Geriatrics Society 52(9):1456-62, 2004).
2. VA health services use in older veterans living alone was examined by JS Guzman, GNP and Drs. L Sohn and ND Harada in a retrospective study. They found that living alone had no effect on the total number of VA outpatient visits, but was associated with an increased number of visits to non-VA health care facilities and more prescription refills. The basis and consequences of the different pattern of care services utilization by veterans living alone warrants further study (Journal of the American Geriatrics Society 52(4):617-22, 2004).
3. Veterans' perspectives on VA care accessibility and acceptability were assessed by Drs. ND Harada and S Dhanani in a series of focus group studies. Veterans' key concerns included a need for better information about available services, concern about possible welfare status stigma, physician attentiveness, and the need for respect for their veteran status. These studies are continuing (Military Medicine 169(9): 735-740, 2004).
4. The basis of decreased immune cell function in older veterans was examined by Drs. K Uyemura, SC Castle and T Makinodan. They showed that a shift in the levels of two key regulatory proteins, interleukin-10 and interleukin-12, in older persons appeared to produce suppressive effects on multiple key aspects of immune functioning (Biomedicine & Pharmacotherapy 57(5-6):246-50, 2003).
5. Fibronectin is a major cell binding and regulatory protein found in joint fluid. In studies of the biologic effects of the breakdown products of fibronectin found in the joints of older patients with osteoarthritis, Drs. TJ Hahn and S McDougall found that several of these products had distinct adverse effects on joint cell function. This finding should ultimately lead to the development of better methods for the prevention and treatment of osteoarthritis in older veterans (Arthritis Research & Therapy 5(6):R329-39, 2003).

b. Key Findings Published in Current Year – GRECC Core Staff as Co-Investigators on Projects with Non-GRECC PI *(list up to five; for each item provide GRECC Core Staff name(s), journal reference, and up to five line description of topic/method/ results/clinical significance; use layperson language):*

1. In studies directed toward developing better methods to heal defects on bone caused by traumatic wounds and cancer treatment, Dr. DT Yamaguchi collaborated with Dr. T Miller of the VA GLA Plastic Surgery Division in studies of the effects of bone growth factors on bone formation by cells grown in various support matrices. It was found that use of a 3-D protein support matrix in combination with bone morphogenic protein-2 treatment stimulated new bone development (Experimental Cell Research. 299(2):325-34, 2004).
2. Type 2 diabetes is an increasing problem in older veterans. Drs. DT Yamaguchi and MJ Rosenthal collaborated with Dr. VL Go of UCLA in studies of the effect of zinc supplementation on blood glucose regulation in diabetic rats, demonstrating that oral zinc supplements improved blood glucose control. This observation could lead to improved management of diabetes in older veterans (Experimental Biology & Medicine 228(11):1338-45, 2003).

3. Arthritis is increasingly a major disabling chronic disorder in older veterans. To examine the effects of a new treatment for arthritis, Dr. MA Fang collaborated with investigators at the St. Louis VA Medical Center in a case review study of the new antirheumatic drug leflunomide in a cohort of 3,325 veterans. It was found that leflunomide was relatively safe and effective in reducing major joint symptoms, although somewhat less well tolerated in veterans over age 75 (Arthritis & Rheumatism 49(6):745-51, 2003).

4. Osteoporosis and resulting bone fractures are increasing in the older veteran population, and current treatments often have limited effectiveness due to poor bone responses in the elderly. In collaborative studies, Dr. TJ Hahn and Dr. F Parhami at UCLA have discovered a new class of naturally occurring compounds, the oxysterols, that dramatically increase the development of adult stem cells into functioning bone cells. This could lead to effective new treatments for osteoporosis in older veterans (Journal of Bone & Mineral Research 19(5):830-40, 2004).

5. Major trauma produces a variety of deleterious responses throughout the body. In collaborative studies, Dr. TJ Hahn and Dr. JH Peters of the Sacramento VA Medical Center have shown that major trauma causes a marked increased in blood levels of inflammation-stimulating breakdown products of the regulatory protein fibronectin. Controlling the production and action of these products could improve survival and speed healing (Journal of Laboratory & Clinical Medicine. 141(6): 401-10, 2003).

6. EDUCATION

NOTE: Do not list trainee and conference data here. Those data are reported in the GRECC Electronic Database.

a. **Innovations in Educational Activities Implemented During Current Year** (*list up to five; for each item, up to three lines on how it is innovative*):

1. Geriatric medicine fellows' curriculum enhanced to include ≥ 1 peer-reviewed article / fellow co-authored with GRECC medical staff in MANDA, to improve training for future leaders in geriatrics.

2. Expanded educational collaboration partnerships on wellness and aging to include California State University, Fullerton, located within VISN 22. This innovation expands faculty expertise to include community-based settings.

3. Expanded educational collaborations on aging curriculum with California Community Colleges statewide to enhance undergraduate geriatrics and gerontology training in the CCCs.

4. Collaborated with the County of Los Angeles on a major annual county-wide health fair providing education and services for elders. Over 3,000 attendees in FY04.

b. **Exportable Educational Products First Available for Distribution in Current Year** (*list up to five most important products; for each item, up to three lines summarizing content, target audience, format, product evaluation results. Include educational products developed in previous years ONLY if this is the first year they have been available for distribution*):

1. Syllabus on decisional capacity in notebook form. Target audiences: Medicine, Nursing, Social Work, Psychology, Psychiatry, PM&R, and Institutional Review Boards

2. 2004 syllabus on geriatric medicine and board review in notebook form. Target audience: Medicine, Nursing, Pharmacy, and Psychiatry

3. A geriatrics pain management pocket reference. Target audiences: Medicine, Surgery, Nursing, Psychiatry, and PM&R.

4. A Vial of Life kit containing key emergency care access numbers, VA program information, medications information, and DNR and advanced directives guidance. Target audiences: VA patients and caregivers.

7. NEW CLINICAL MODELS

NOTE: These are new models of care for elderly veterans that the GRECC is developing and evaluating, in relation to its area(s) of focus. This is NOT a list of all Geriatrics & Extended Care clinical programs at the host VAMC.

a. **New Clinical Models Implemented in Current Year** (*list all new clinical models or significant modifications of existing models that the GRECC is developing and evaluating. For each item, indicate whether New or Ongoing in current year; provide up to five line description*):

1. A Falls Prevention Screening Clinic program – This program was developed as an evidenced-based process to assess falls risk, develop individualized interventions, and provide follow up on efficacy of interventions. The Falls Prevention Clinic was developed and evaluated in conjunction with the GLA Physical Medicine and Rehabilitation Service, was a clinical success, and is now is a free-standing program run by the PM&R service. It also serves as a key teaching program for Geriatric Medicine Fellows and PM&R Residents.

2. Program to Assess Decisional Capacity to Return Home (PADC) – Research evaluation
The PADC clinical program is still under development. A protocol that streamlines assessment, uses standardized instruments, and utilizes a template to document assessment and provide management assistance has been developed and tested. A major national consensus conference was held in August 2004 regarding project instruments and design. PADC assessments will initially be compared with the results of formal Geriatric Psychiatry testing for validation.

3. Medication Education Clinic – The goal of this project is to develop a program to educate patients and staff about the dangers of outdated and discontinued medications, to attempt to reduce the incidence of adverse drug events in older patients. We are currently in the process of developing a consensus as to the optimal components for assessments and are developing a template for CPRS. When this phase is completed, we will implement and evaluate this new clinical approach.

4. Care Coordination Home telehealth (CCHT) Programs – Initial development is underway on two new clinical demonstration projects that will test the effectiveness of CCHT techniques in improving the care of 1) frail older community-dwelling veterans who are at high risk for further functional decline, and 2) older veterans with deconditioning who are continuing on rehabilitation programs at home following hospital discharge.

b. **Current Year Evaluation Results of New Clinical Models** (*for each clinical model listed in 7-a above, indicate whether evaluated by Research or Quality Improvement project; up to five lines summarizing evaluation outcomes, such as changes in access to care, patient functioning, satisfaction, cost-effectiveness, organizational changes, etc. Note if no evaluation results in current year for a particular model*):

NOTE: Do not list patient service utilization data here. Those data are reported in the GRECC Electronic Database.

1. Falls Prevention Screening Clinic program (FSCP) – Research evaluated - Greater than 80% of patients reported complete satisfaction with the FSCP. The Fall Efficacy Scale improved by an average of 8 points at follow-up ($p = 0.03$). Primary care providers acknowledged pharmacy recommendations, and over 80% of the recommendations were followed. Reported falls decreased by 58% ($p = 0.0008$), and 62% of patients had a reduced number of falls. 28% of the recurrent fallers (> 2 falls/3 months) reported no falls in the 3-month follow up period. A manuscript has been submitted for publication.

2. Program to Assess Decisional Capacity to Return Home (PADC) – Research evaluation - the PADC clinical program is still under development. A protocol that streamlines assessment, uses standardized instruments, and utilizes a template to document assessment and provide management assistance to the primary provider has been developed and tested. A major national consensus conference was held in August 2004 to get expert input open project instruments and design. PADC assessments will be compared with formal Geriatric Psychiatry testing for initial validation.

3. Medication Education Clinic – Research evaluation. This program is still under development. Initial testing of the patient education component showed an improvement 2-5 questions answered correctly vs. baseline medication knowledge. The next phase is to develop consensus on assessment components and a template for CPRS. The project is currently on hold since the GRECC team Pharmacy staff member was recently pulled to cover other services, and the lead NP has entered a PhD program.

4. Care Coordination Home Telehealth (CCHT) Programs – No evaluation results. These programs are in the beginning stages of development. Using techniques already applied in implementing CCHT programs in VISN 22, GRECC staff will develop and evaluate new CCHT programs designed to improve the management of frail elderly veterans at risk for functional decline and to improve the outcomes of post hospital discharge rehabilitation programs for older adults.

c. New Clinical Models Exported in Current Year (list up to five examples, up to two lines each; provide name of new clinical model, name of VA or non-VA facility to which it was exported, and method of export, such as “Falls Clinic protocol sent to X VAMC”):

Falls Prevention Screening Clinic Program – All clinical protocols and assessment tools, along with training and guidance have been exported to the Las Vegas and Tampa VA medical centers. Export to additional centers is planned, and a manuscript has been submitted to a peer-reviewed journal.

8. CONSULTATION AND OUTREACH

NOTE: **Consultation** = GRECC staff going to sites within host VAMC or having those staff come to the GRECC, to assist in development of research, education or clinical programs at those sites. **Outreach** = GRECC staff going to non-host VAMC facilities or having those staff come to the GRECC (in person or by video or other technology) to assist in development of research, education or clinical programs at those sites.

a. Current Year Activity Outcomes (list up to five examples, up to two lines each; summarize specific outcomes realized from current year **consultation**, e.g., “Host VAMC instituted a Falls Clinic after consultation from GRECC staff;” or **outreach**, e.g., X VAMC instituted a Falls Clinic after GRECC outreach via series of videoconferences):

1. Host VAMC and Tampa VAMC both established a Falls Clinic after consultation from GECC staff led by SC Castle MD.

2. Host VAMC, Las Vegas VAMC, Loma Linda VAMC, Long Beach VAMC and San Diego all instituted Care Coordination Home Telehealth (CCHT) programs after consultations from GRECC staff.

3. TJ Hahn MD and J Kramer PhD provided consultation to the California State Veterans Home Department in the development of clinical, educational and staffing plans for the development of a new state veterans home to be build on the WLA campus of GLA.

4. ND Harada PhD and L Opalinski MSW provided consultation to VISN 22 and all five VISN medical centers regarding the development of an evaluation component for the New VISN CCHT program.

5. JC Chodosh MD provided consultation to the UCLA School of Medicine on the development of essentials of geriatrics training program to be targeted to UCLA surgical staff and trainees.

b. Previous Years’ Activities Outcomes (list up to five examples, up to two lines each; summarize specific outcomes realized from previous years’ **consultation** to host VAMC or **outreach** to non-host facilities, where results were first realized in the current year.):

1. Las Vegas VAMC established a Falls Clinic after consultation from GECC staff led by SC Castle MD.

2. Consultations provided by TJ Hahn MD and J Kramer PhD to the California State Veterans Home (CSVH) Department from 2000-2003 resulted in the approval and funding of a new academic CSVH to be located on the WLA campus at GLA.
3. Expertise provided by TJ Hahn MD, L Opalinski MSW, SC Castle MD and ND Harada PhD to the Las Vegas VAMC resulted in the implementation of a new community-based GEC program with an outpatient GEM, Geriatrics Clinic, HBPC, Outpatient Respite and Home Hospice.
4. Consultations led by Jenice Guzman GNP led to the development and distribution of a new geriatrics and extended care services patient education brochure.
5. Consultations by E Spaziano LCSW to the host VAMC led to the development of a new clinical guideline for identification of elder abuse.